

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Original) A valve system for use with a variable head of fluid, the valve system comprising a first diaphragm and a means for transferring a fluid pressure associated with the variable head of a first fluid to the first diaphragm wherein the position of the first diaphragm is controlled by the fluid pressure associated with the variable head of the first fluid.
2. (Original) A valve system as claimed in Claim 1 wherein when the valve system is deployed the first diaphragm is located above the variable head of the first fluid.
3. (Currently Amended) A valve system as claimed in ~~Claims 1 or 2~~ Claim 1, wherein the valve system is connected to a supply line to the variable head of the first fluid such that the first diaphragm moves between an open position, wherein the first fluid is free to flow within the fluid supply line, and a closed position, wherein the first fluid is prevented from flowing within the fluid supply line.
4. (Currently Amended) A valve system as claimed in ~~any of the preceding claims~~ Claim 1, wherein the first diaphragm comprises a blocking means to assist the first diaphragm move to the closed position.

5. (Currently Amended) A valve system as claimed in ~~any of the preceding claims~~ Claim 1, wherein the means for transferring a fluid pressure associated with the variable head of the first fluid comprises a compressible second fluid.
- 6) (Original) A valve system as claimed in Claim 5 wherein the compressible second fluid is contained within one or more tubes connected at a first end to the first diaphragm and positioned so that when in use the second end of the one or more tubes are located below the surface of the head of variable first fluid.
- 7) (Currently Amended) A valve system as claimed in ~~Claims 5 or 6~~ Claim 5, wherein the first diaphragm comprises an inflatable element so that the valve system can be employed as a flood barrier.
- 8) (Currently Amended) A valve system as claimed in ~~Claims 6 or 7~~ Claim 6, wherein the tube is connected to the first diaphragm via a diaphragm valve.
- 9) (Original) A valve system as claimed in Claim 8 wherein the means for transferring a fluid pressure further comprises one or more chambers located between the diaphragm valve and the first diaphragm.
- 10) (Original) A valve system as claimed in Claim 9 wherein the first diaphragm comprises an aperture that provides a means for communicating a sample taken from the supply line to the variable head of the first fluid to the one or more chambers.

11) (Currently Amended) A valve system as claimed in ~~Claims 9 or 10~~ Claim 9, wherein when the diaphragm valve moves to a closed position a pressure build up in the one or more chambers so causing the first diaphragm to move from the open position to the closed position.

12) (Currently Amended) A valve system as claimed in ~~any of the preceding Claims~~ Claim 1, wherein the valve system further comprises an adjuster wherein the adjuster provides a means for varying the dependency of the position of the first diaphragm to the fluid pressure associated with the variable head of the first fluid.

13) (Original) A valve system as claimed in Claim 13 wherein the adjuster comprises a plurality of apertures and a sleeve located on an outer surface of the tube wherein the sleeve provides a means for covering one or more of the plurality of apertures.

14) (Currently Amended) A valve system as claimed in ~~Claims 12 or 13~~ Claim 12, wherein the adjuster comprises a means for varying the resistance required to activate the diaphragm valve.

15) (Original) A valve system as claimed in Claim 14 wherein the means for varying the resistance required to activate the diaphragm valve comprises a bias means and an adjustment screw wherein the position of the adjustment screw defines the resistance force applied by the bias means to the diaphragm valve.

16) (Currently Amended) A valve system as claimed in ~~any of Claims 3 to 15~~ Claim 3, wherein the valve system further comprises an automatic cut off means so that in the event of mechanical failure the first diaphragm is moved to the closed position.

17) (Original) A valve system as claimed in Claim 16 wherein the automatic cut off means comprises one or more sections of absorbent material such that when the first fluid is incident on the absorbent material expansion occurs so as to cause the diaphragm valve to close.

18) (Currently Amended) A valve system as claimed in ~~any of Claims 8 to 17~~ Claim 8, wherein the diaphragm valve comprises a plunger that assists movement to the closed position.

19) (Currently Amended) A valve system as claimed in ~~any of Claims 8 to 18~~ Claim 8, wherein the diaphragm valve further comprises a lever gate that further assists the movement to the closed position.

20) (Original) A valve system as claimed in Claim 5 wherein the means for transferring a fluid pressure further comprises a second diaphragm and actuating rod connected at first end to the second diaphragm such that the second diaphragm is located below the surface of the head of fluid and provides a means for varying the position of the actuating rod.

21) (Original) A valve system as claimed in Claim 20 wherein the means for transferring fluid pressure further comprises a pin connected to a second end of the actuating rod, an aperture located within the first diaphragm and one or more chambers located below the first diaphragm

such that movement of the actuating rod causes the position of the pin to move relative to the first diaphragm and the one or more chambers.

22) (Original) A valve system as claimed in Claim 21 wherein the pin comprises one or more central sections of a first diameter that is smaller than a second diameter of end sections of the pin such the position of the pin determines whether fluid from the supply can enter the one or more chambers.

23) (Currently Amended) A valve system as claimed in ~~Claims 21 or 22~~ Claim 21, wherein the first diaphragm is in the closed position when the pin is located so as to ~~to~~ allow fluid to enter the one or more chambers.

24) (Currently Amended) A valve system as claimed in ~~Claims 21 to 23~~ Claim 21, wherein the first diaphragm is in the open position when the pin is located so as to prevent fluid from entering the one or more chambers.

25) (Original) A valve system as claimed in Claim 24 wherein when the first diaphragm is in the open position fluid within the one or more chambers is expelled from the one or more chambers via one or more capillaries.

26) (Currently Amended) A valve system as claimed in ~~any of Claims 20 to 25~~ Claim 20, wherein the means for transferring fluid pressure further comprises a second bias means to aid the first diaphragm move from the closed position to the open position.

27) (Currently Amended) A valve system as claimed in ~~any of Claims 5 to 26~~ Claim 5, wherein the compressible second fluid is air.

28) (Currently Amended) A valve system as claimed in ~~any of Claims 5 to 26~~ Claim 5, wherein the compressible second fluid is water.